APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/612,350	07/06/2000	Ronald O'Neal Edmark	AUS000057US1	7192

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EXAMINER
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ART UNIT	PAPER NUMBER
2122	

DATE MAILED: 12/22/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with th correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 July 2000</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12,14-21 and 23-34* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,14-21 and 23-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Pri rity under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

REMARKS

1.   This Office Action is the response to the communication received on

September 4, 2003. Reconsideration of the instant application is requested by

Applicant. All such supporting documentation has been placed of record in the

file. Claims 13 and 22 are cancelled, claims 29 - 34 have been added and claims

1-12,14-21, and 23-34 are pending.

    a.   Previously claims 1 - 28, were rejected under 35 U.S.C. § 102 (e) as

       being anticipated by USPN 6,539,339 B1.

    b.   In this action, atleast claims 12,19,21,23-25 and 28 have been including

       been amended. And claims 29-34 have been added.

    c.   In arguing Applicant asserts as stated in page 13 of 21, of response dated

       dated 09/04/03, that Berry doesn't disclose "***determining whether the***

       identified kernel thread has been reused or updating profile

       information with the kernel thread level profile information".

    d.   Examiner has reproduced independent claims as rejected from previous

       office action for completeness.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102

that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United
States before the invention thereof by the applicant for patent, or on an international application by another
who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the
invention thereof by the applicant for patent.

4. Claims 1-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Berry

et al. USPN 6,539,339 B1.

Regarding claim 1 Berry anticipates, monitoring performance of a program,

system (Col. 26 lines 5 to Col. 26, lines 60) and method (Col. 25 lines 45 to Col. 26 line

5) being executed using per thread metric variables with reused kernel threads

comprising:

receiving an event indication (3:35-40);

ascertaining kernel thread level profile information(3:40-47);

identifying a kernel thread, wherein the kernel thread level profile information is

attributed to the identified kernel thread (3:40-47);;

determining whether the identified kernel thread has been reused

(17:3-5, see recursion depth for reuse also see 3:23-25, and 42-45, see event

notification and occurrence); and

updating profile information with the kernel thread level profile information based

whether the identified kernel thread has been reused (fig, 22, 2216, 24:10-30).

Regarding claim 2 the method recited in claim 1 above, wherein determining

whether the identified kernel thread has been reused further comprises:

checking a hash table for an entry of the identified kernel thread (10:55-57).

Regarding claim 3 the method recited in claim 1 above, wherein updating profile information with the kernel thread level profile information based on the identified kernel thread is reused further comprises:

applying the kernel thread level profile information for the reused identified kernel thread to one of a previous application thread and a new application thread (fig, 22, 2216).

Regarding claim 4 the method recited in claim 2 above, wherein updating profile information with the kernel thread level profile information based on the identified kernel thread is reused further comprises:

applying the kernel thread level profile information for the reused identified kernel thread to one of a previous application thread and a new application thread (fig, 22, 2216);

marking the previous application thread being terminated (fig 23,2302) ; and

associating the reused identified kernel thread with the new application thread in the hash table(fig 23,2306, and refer back to10:55-57, for hash table) .

Regarding claim 5 the method recited in claim 1 above, wherein the profile information is stored in a node for a application thread which is associated with the kernel thread level profile information (23:57-60).

Regarding claim 6 the method recited in claim 1 above, wherein ascertaining kernel thread level profile information further comprises:

sending a request for kernel thread level profile information to an operating system kernel, wherein the operating system kernel responds to the request by (3:35-40, 10:35-45):

receiving the request for kernel thread level profile information (10:35-45);

accessing a processor data area containing processor level accumulated profile information (10:40-55, see collected area);

calculating a change in processor level accumulated profile information (15:20-40,55-60, for processor level see elapsed, cum, and base times, also see processor time spent from 55-60);

accessing kernel thread level profile information held by the operating system kernel (16:25-30, see timing information for profile information); updating kernel thread level profile information held by the operating system kernel with the change in processor level accumulated profile information (15:20-40,55-60,16:25-30); and

sending the kernel thread level profile information held by the operating system kernel to a requestor (23:53-55).

Regarding claim 7 the method recited in claim 5 above further comprises:

resetting the kernel thread level profile information held by the operating system kernel (25:1-4).

Regarding claim 8 the method recited in claim 1 above, wherein updating profile information with the kernel thread level profile information based whether the identified kernel thread has been reused further comprises:

updating an information area for a current application thread based on the identified kernel thread having not been reused (17:3-5, see recursion depth for reuse).

Regarding claim 9 the method recited in claim 1 above, wherein updating profile information with the kernel thread level profile information based whether the identified kernel thread has been reused further comprises: updating an information area for a previous application thread based on the identified kernel thread having been reused (17:3-5, see recursion depth for reuse, 17:3-5).

Regarding claim 10 the method recited in claim 1 above, wherein updating profile information with the kernel thread level profile information based whether the identified kernel thread has been reused further comprises:

accessing an information area for a application thread based on the identified kernel thread(10:15-20);

updating an information area for the application thread.

Regarding claim 11 the method recited in claim 3 above, wherein the application is a Java application (7:10-15).

Regarding claim 12 see reasoning in claim 1.

Regarding claim 13 the method recited in claim 12 above, wherein the application thread is a previous application thread based on the kernel thread having been used (fig 23, 2302).

Regarding claim 14 the method recited in claim 13 above, further comprises:

identifying the application thread as being terminated based on the kernel thread having been used.

Regarding claim 15 see claim 4 for reasoning.

Regarding claim 16 the method recited in claim 12 above, wherein determining if the kernel thread has been used further comprises: comparing an identity of the kernel thread to a list of identities of previously used kernel threads (fig 23, 2306).

Regarding claim 17 the method recited in claim 12 above, wherein the value of a metric variable for a kernel thread is a change in value of the metric variable since the last receipt of the metric variable for the kernel thread (fig 23,2312).

Regarding claim 18 the method recited in claim 12 above, wherein the metric variable relates to one of allocation bytes, allocation objects, time, live object and live bytes (for allocation bytes see bytes in claim 1).

Regarding claim 19 see claim 1 for reasoning.

Regarding claim 20 the method recited in claim 19 above, wherein the plurality of values of a metric variables for a plurality of kernel threads are received from an operating system kernel wherein each of the plurality of values was contained in a linked list of entries, each entry in the linked list being a value of a metric variable for a specific kernel thread (23:55-60, see link list).

Regarding claim 21, see claim 1 for reasoning.

Regarding claim 22 the system recited in claim 21 above, wherein the application thread is a previous application thread based on the kernel thread having been used (fig 23,2302).

Regarding claim 23 see reasoning in claim 4.

Regarding claim 24 the system recited in claim 21 above, wherein the application thread is a current application thread based on the kernel thread having not been used (fig 23,2302).

Regarding claim 25 the system recited in claim 21 above, wherein the determining means for determining if the kernel thread has been used further comprises:

comparing means for comparing an identity of the kernel thread to a list: of identities of previously used kernel threads (fig 23,2306, see computing difference for comparing).

Regarding claim 26. The system recited in claim 21 above, wherein the value of a metric variable for a kernel thread is a change in value of the metric variable since the last receipt of the metric variable for the kernel thread (fig 23, 2312).

Regarding claim 27, see reasoning in claim 18.

Regarding claim 28, see reasoning in claim 1.

Regarding claims 29,method of claim 12, wherein the value of the metric variable for the kernel thread is received in response to an event occurring based on the execution of the second application thread (Col.3 lines 35-50, see current thread).

Regarding claims 30 method of claim 12, wherein applying the value of the metric variable to the second application includes increasing current metric value for the second application thread in a node associated with the second application thread by an amount equal to the value of the metric variable (Col.3 lines 35-50, see current thread).

Regarding claim 31, Examiner is applying the same rationale to claim, which is the system version of the method claim as discussed in claim 29 above.

Regarding claim 32, Examiner is applying the same rationale to claim, which is the system version of the method claim as discussed in claim 30 above.

Regarding claim 33, Examiner is applying the same rationale to claim, which is the product version of the method claim as discussed in claim 29 above.

Regarding claim 34, Examiner is applying the same rationale to claim, which is the product version of the method claim as discussed in claim 30 above.

Response to Arguments

5. Applicant's arguments filed 09/04/2003 have been fully considered but they are not persuasive to overcome previous rejection.

(1) In claim 1 Applicant has argued that, prior art doesn't teach or disclose _determining whether the identified kernel thread has been reused_.

Response (1) As set forth in claim 1, above Berry shows in Col. 3, lines 23 – 25 and lines 42-45, notification of event occurrences. Examiner believes this is the same as Applicant's limitation of whether the thread has been reused.

(2) In claim 1 Applicant also argues that, prior art doesn't teach or disclose _updating profile information with the kernel thread level profile information_"

Response (2) As set forth above in claim 1, Berry shows in Col. 24, lines 15-30, adding, updating and maintaining information regarding threads and also time stamp for the thread which it places in a trace record.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Correspondence Information

7.   Any inquires concerning this communication or earlier

communications from the examiner should be directed to Chuck O.

Kendall who may be reached via telephone at (703) 308-6608. The

examiner can normally be reached Monday through Friday between 8:00

A.M. and 5:00 P.M. est.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Tuan Dam *can be* reached at *(703) 305-4552.*

Any inquiry of a general nature or relating to the status of this

application or proceeding should be directed to the Group receptionist

whose telephone number is (703) 305-3900.

For facsimile (fax) send to central FAX number 703-872-9306 *and*

703-7467240 draft.

Chuck O. Kendall

Software Engineer Patent Examiner

Chuck C. Dom
Primary Patent Examiner
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11/17/03